

**WYOMING VOLUNTEER FIREFIGHTER AND EMERGENCY  
MEDICAL TECHNICIAN PENSION FUND**

ACTUARIAL VALUATION REPORT

FOR THE YEAR BEGINNING JANUARY 1, 2017

April 24, 2017

Board of Trustees  
**Wyoming Volunteer Firefighter and Emergency Medical Technician Pension Fund**  
6101 Yellowstone Road  
Suite 500  
Cheyenne, WY 82002

Dear Board of Trustees:

**Subject: Actuarial Valuation as of January 1, 2017**

We are pleased to present the report of the actuarial valuation of the Wyoming Volunteer Firefighter and Emergency Medical Technician Pension Fund (“the Fund”) for the plan year commencing January 1, 2017. This report describes the current actuarial condition of the Fund and determines the calculated employer contribution amount (the actuarially determined contribution amount). Valuations are prepared annually, as of January 1, the first day of the Fund’s plan year.

### **Financing objectives and funding policy**

The employee contribution amounts are specified in statute. The state treasurer shall deposit into the Fund 70% of the gross tax levied upon fire insurance premiums paid to insurance companies for fire insurance in the state. The purpose of this actuarial valuation is to determine whether or not these contribution amounts are sufficient to meet the obligations of the Fund.

### **Progress toward realization of financing objectives**

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan’s funded status. The funded ratio, based upon the assumption of no future cost-of-living adjustments as of January 1, 2017 is 76.46%. This compares to a funded ratio of 74.40% for the prior year. On a market value of assets basis, the funded ratio is 72.41% as of January 1, 2017, compared to a funded ratio of 69.48% for the prior year.

### **Benefit provisions**

This is a newly established fund as of July 1, 2015, created under House Bill 72 of the 2015 General Session, which replaces the Volunteer Firemen’s Pension Fund and the Volunteer Firefighter Emergency Medical Technician Pension Fund. The benefit provisions reflected in this valuation are those which were in effect on January 1, 2017. W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. Therefore, this valuation does not include any liability for future cost-of-living increases.

The benefit provisions are summarized in Appendix B of the report.

### **Assumptions and methods**

Actuarial assumptions and methods are set by the Board, based upon recommendations made by the plan's actuary.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution amounts and funding periods. The actuarial calculations presented in the report are intended to provide information for rational decision making.

The employer contribution requirement in Table 1 of this report is determined using the actuarial assumptions and methods disclosed in Appendix A of this report. This report does not include a detailed assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the plan's financial condition.

All assumptions and methods are described in Appendix A of the report.

### **Data**

Member data for retired, active and inactive members was supplied as of January 1, 2017 by the Fund's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset and financial information as of January 1, 2017 was prepared by Wyoming Retirement System and is the responsibility of management. Eide Bailly, LLP provided us the asset and financial information and will opine on Wyoming Retirement System's statements.

### **Plan experience**

As part of each valuation, we examine the Fund's experience relative to the assumptions. As experience in a given year deviates from the assumptions, a gain occurs if the liabilities grow slower than the assumption set anticipates and a loss occurs if the liabilities grow faster. This past fiscal year, the Fund had a total experience loss of approximately \$1.3 million, composed of a \$1.7 million investment loss, a \$0.1 million contribution gain, and a \$0.3 million liability gain. The gain in liability was primarily due to fewer retirements than expected. The aggregate results of these analyses are disclosed in Tables 4 and 5 under Section III of the report.

**Actuarial certification**

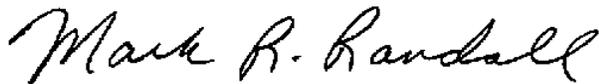
All of the tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith & Company. We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Fund as of January 1, 2017.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code and ERISA. The undersigned are independent actuaries and consultants. Leslie Thompson is an Enrolled Actuarial and Leslie Thompson and Paul Wood are members of the American Academy of Actuaries, and meet all the Qualification Standards of the American Academy of Actuaries. Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

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Respectfully submitted,

**Gabriel, Roeder, Smith & Company**



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Chief Executive Officer



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## **SECTION I**

### **EXECUTIVE SUMMARY**

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Executive Summary

Item	January 1, 2017	January 1, 2016
	No COLA	No COLA
1. Contributions:		
a. Total normal cost	\$1,241,952	\$1,285,552
b. Employee contributions	(417,600)	(428,220)
c. Other expected contributions	-	-
d. Net employer normal cost	\$824,352	\$857,332
e. Amortization payment	2,010,733	2,187,240
f. Administrative expenses	88,500	83,700
g. Required contribution	\$2,923,585	\$3,128,272
h. Estimated premium tax allocation*	(3,250,000)	(3,100,000)
i. Shortfall/(surplus)	(\$326,415)	\$28,272
2. Funding Elements:		
a. Market value of assets (MVA)	\$74,037,986	\$71,065,986
b. Actuarial value of assets (AVA)	\$78,176,796	\$76,097,619
c. Actuarial accrued liability (AAL)	\$102,244,853	\$102,278,423
d. Unfunded/(overfunded) actuarial accrued liability (UAAL)	\$24,068,057	\$26,180,804
3. Contributions and Ratios:		
a. Annual required contribution	\$2,923,585	\$3,128,272
b. Actual contributions	N/A	3,198,930
i. Employer	N/A	-
ii. Other	N/A	3,198,930
c. Percentage contributed	N/A	102.26%
d. Funded ratio on an actuarial basis (AVA/AAL)	76.46%	74.40%
e. Funded ratio on a market basis (MVA/AAL)	72.41%	69.48%

\* The premium tax is equal to 70% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming on or after July 1, 2015. The premium tax for 2017 has been estimated based on the premium tax paid for 2016 (\$3,198,930).

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## **SECTION II**

### DISCUSSION

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## Contribution Requirements

- Exhibits throughout this report are based primarily, unless stated otherwise, on the assumption of no future cost-of-living adjustments (COLA)
- W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. The actuarial value funded ratio is 76.46% and the market value funded ratio is 72.41%.
- The estimated State premium tax allocation is \$3.25 million this year, as estimated based on the actual premium tax paid for 2016 of \$3.20 million.
- The amortization payment is based upon the following assumptions:
  - 30-year open funding period
  - Amortization payment amounts are calculated in such a way that they will remain level as a dollar amount.
  - Future growth in the number of active members is not reflected in the annual valuation
- The calculated funding period assuming an annual contribution of \$3.25 million is 19.6 years.
- Benefit provisions effective July 1, 2015, as authorized by new legislation in HB 72 of the 2015 General Assembly, are summarized in Appendix B.
- There are no changes to the actuarial methods since the prior valuation.

## Calculation of Contribution Amounts

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits typically come from investment income). The Fund receives contributions from two primary sources, state contributions equal to 70% of gross fire insurance premium taxes and member contributions of \$15.00 per month per member. In addition, the prior EMT “set-aside” funds were transferred to this plan. As shown in Table 1 under Section III of the report, the calculated employer contribution amount has three components:

- The normal cost (NC)
- The amortization payment
- The administrative expenses

The NC is the theoretical amount which would be required to pay the members’ benefits if this amount had been contributed from each member’s entry date and if the fund’s experience exactly followed the actuarial assumptions. The NC is shown in Table 1 under Section III of the report.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan’s assumptions, changes to the plan’s actuarial assumptions, and amendments to the benefit provisions.

The amortization payment is the amount required to fund this difference. It is the amount, expressed as a level dollar amount, necessary to amortize the UAAL. This amortization is over a period of 30 years.

Administrative expenses are the average of the actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.

The calculated amount is used in determining the contributions necessary to meet the Actuarially Determined Contribution for the twelve-month period beginning January 1, 2017.

## Financial Data and Experience

As of January 1, 2017, the Fund has a total market value of \$74 million. Financial information was received from Eide Bailly, LLP.

Table 7 under Section III of the report shows a reconciliation of the market values between the beginning and end of 2016.

During 2016, the total investment return on the market value of assets (MVA), as reported by Meketa Investment Group, Inc., was 7.60%, as shown in Table 10 under Section III of the report.

In determining the contribution rates and funded status of the Fund, an actuarial value of assets (AVA) is used rather than the market value of assets. The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (or less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

This is a new fund established as of July 1, 2015 where the initial market value of assets includes the total amounts from the two prior funds which have been rolled into this fund. Since the new plan has greater contributions and benefit payments than the combined amounts under the prior discontinued plans, the actuarial value of assets has been reinitialized to the market value of assets as of January 1, 2015.

The development of the AVA is shown in Table 9 under Section III of the report. The AVA is \$78 million, compared to \$76 million last year. The AVA is 105.59% of the MVA as of December 31, 2016, compared to 107.08% last year.

In addition to the market return, Table 10 also shows the return on the actuarial value of assets for the Fund. For 2016, this return was 5.44% which is less than the assumed 7.75% investment return.

## Member Data

Member data as of January 1, 2017 was supplied electronically by the Fund's staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Table 15 under Section III of the report shows the number of members by category (active, inactive, retired, etc.) along with member statistics. Tables 16 through 24 show summaries of certain historical data and include membership statistics.

Of the 2,320 active participants, 209 are eligible or will become eligible for retirement in 2017.

## Benefit Provisions

Appendix B of the report includes a more detailed summary of the benefit provisions for the Fund. These are the benefit provisions in effect January 1, 2016, per HB 72 as passed by the Wyoming General Assembly in the 2015 general session. A brief summary is as follows:

- *Normal Retirement Eligibility*
  - Age 60 with 5 years of service
- *Normal Retirement Benefit*
  - \$16 per month for each of the first 10 years of service and \$19 per month for each year of service over 10
- *Spouse Benefits*
  - 66% of the member's benefit payable prior to the member's death
- *Employee Contributions* are required
  - \$15 per month
- *Post-retirement Cost-of-Living Adjustments (COLAs)*
  - W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.

## Actuarial Methods and Assumptions

Appendix A of the report includes a summary of the actuarial assumptions and methods used in this valuation. A few highlights are listed as follows:

- Costs are determined using the Entry Age Normal actuarial cost method, calculated as a level dollar amount.
- The unfunded actuarial accrued liability is amortized over an open 30 year period as a level dollar amount.
- The assumed annual investment return rate is 7.75%, with assumed inflation of 3.25%.
- Inactive vested participants are assumed to retire at normal retirement eligibility or the valuation date if already eligible to retire.
- No benefit data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.

The average future lifetime for current pensioners is 15.3 years.

There have been no changes to the actuarial methods since the prior valuation.

There was a programming change for the commencement date for vested terminated members as recommended by the recent audit and consistent with plan provisions. The commencement age has been changed from “immediate” commencement of the benefit to a deferred commencement age of 60. The impact of this programming change was a gain of \$3.2 million.

The actuarial assumptions and methods will be reviewed in detail as part of the 2017 Experience Study covering the five year period ending December 31, 2016.

### **GASB and Funding Progress**

Governmental Accounting Standards Board Statement Number 67 (GASB 67) contains certain accounting requirements for the Fund. Schedules, notes and required supplementary information are provided under separate cover.

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## **SECTION III**

### **SUPPORTING EXHIBITS**

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**Calculation of Annual Required Contribution**  
*(Assumes No Future Cost-Of-Living Increases)*

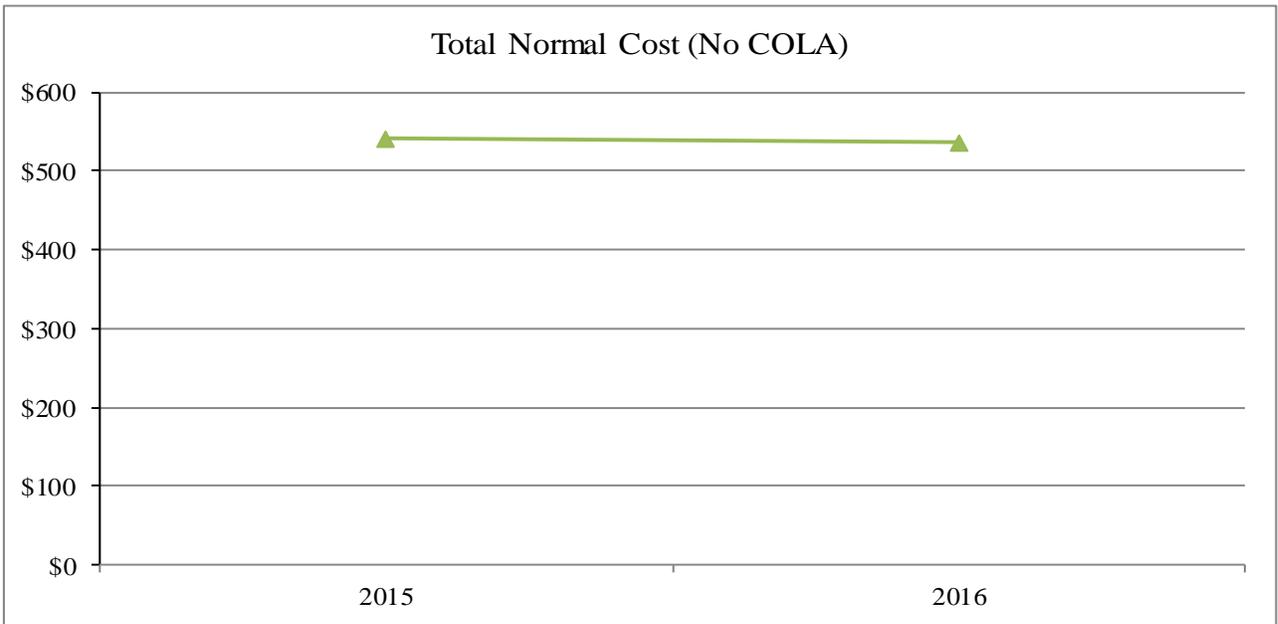
Item	January 1, 2017	January 1, 2016
1. Employer normal cost	\$824,352	\$857,332
2. Actuarial accrued liability for active members		
a. Present value of future benefits for active members	\$46,768,848	\$47,509,599
b. Less: present value of future employer normal costs	(3,621,467)	(3,784,399)
c. Less: present value of future employee contributions	(2,097,105)	(2,156,642)
d. Actuarial accrued liability	\$41,050,276	\$41,568,558
3. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	\$57,054,543	\$53,905,575
b. Disabled members	-	-
c. Inactive members	4,140,034	6,804,290
d. Active members (Item 2d)	41,050,276	41,568,558
e. Total	\$102,244,853	\$102,278,423
4. Actuarial value of assets (Table 9)	\$78,176,796	\$76,097,619
5. Unfunded actuarial accrued liability (UAAL) (Item 3e - Item 4)	\$24,068,057	\$26,180,804
6. UAAL amortization period	30 years	30 years
7. Assumed payroll growth rate	0.00%	0.00%
8. Employer contribution requirement		
a. UAAL amortization payment	\$2,010,733	\$2,187,240
b. Employer normal cost	824,352	857,332
c. Administrative expenses	88,500	83,700
d. Contribution requirement (a + b + c)	\$2,923,585	\$3,128,272

**Cost Breakdown**  
*(Assumes No Future Cost-Of-Living Increases)*

Item	Present Value of Future Normal Costs (1)	Actuarial Accrued Liabilities (2)	Total Present Value of Benefits (3) = (1) + (2)
Age and service allowances based on total service and disability benefits likely to be rendered by present active members	\$4,450,650	\$39,855,637	\$44,306,287
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	106,943	297,714	404,657
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	1,160,979	896,925	2,057,904
Benefits likely to be paid to vested inactive members	-	3,634,296	3,634,296
Benefits to be paid to members due refunds	-	505,738	505,738
Benefits to be paid to current retirees, disabled members, beneficiaries, and future beneficiaries of current retirees	-	57,054,543	57,054,543
Total	\$5,718,572	\$102,244,853	\$107,963,425
Actuarial value of assets	-	\$78,176,796	\$78,176,796
Liabilities to be covered by future contributions	\$5,718,572	\$24,068,057	\$29,786,629

**History of Total Normal Cost**  
*(Assumes No Future Cost-Of-Living Increases)*

<u>Fiscal Year Ending December 31</u>	<u>Total Normal Cost Per Active</u>
(1)	(2)
2015	\$540
2016	535



**Calculation of Total Actuarial Gain/(Loss)**

Item	January 1, 2017
1. Derivation of experience gain/(loss)	
a. Unfunded actuarial accrued liability (UAAL) - previous valuation	\$26,180,804
b. Normal cost (NC) for fiscal year ending December 31, 2016	1,285,552
c. Actual administrative expenses for fiscal year ending December 31, 2016	84,357
d. Actuarially determined contribution for fiscal year ending December 31, 2016	3,556,492
e. Interest accrual:	
(i) For whole year on (a)	2,029,012
(ii) For half year on (b) + (c) - (d)	(84,730)
(iii) Total interest: (e)(i) + (e)(ii)	1,944,282
f. Change in UAAL due to programming enhancement	(3,181,323)
g. Change in UAAL due to assumption change	-
h. Expected UAAL current year: (a) + (b) + (c) - (d) + (e)(iii) + (f) + (g)	22,757,180
i. Actual UAAL current year	24,068,057
j. Experience gain/(loss): (h) - (i)	(1,310,877)
k. Experience gain/(loss) as a % of actuarial accrued liability	-1.28%
2. Approximate portion of gain/(loss) due to investments (at actuarial value)	(\$1,734,276)
3. Approximate portion of gain/(loss) due to contributions higher or lower than expected	\$105,746
4. Approximate portion of gain/(loss) due to liabilities: (1)(j) - (2) - (3)	\$317,653
a. Age & service retirements	685,787
b. Death-in-service	(24,644)
c. Withdrawal from employment	(573,042)
d. Rehires	(48,866)
e. Death after retirement	113,830
f. Other	164,588
g. Other as a % of actuarial accrued liability	0.16%

**Change in Calculated Contribution Amount Since the Prior Valuation**

Item	January 1, 2017
1. Calculated contribution amount as of January 1, 2016	\$3,128,272
2. Change in contribution amount during year	
a. Change in employer normal cost	(\$32,980)
b. Assumption changes	(268,258)
c. Actuarial (gain) loss from investments on actuarial value of assets	146,239
d. Actuarial (gain) loss from liability sources and administrative expenses	(21,986)
e. Difference between contributions made and required contributions	(8,916)
f. Open amortization period reset to 30 years	(18,754)
g. Other changes	(32)
h. Total change	(\$204,687)
3. Calculated contribution amount as of January 1, 2017	\$2,923,585

**Statement of Plan Net Assets**

<b>Assets at Market Value</b>		
<b>Item</b>	<b>FYE 2016</b>	<b>FYE 2015</b>
1. Cash and cash equivalents (operating cash)	\$7,761,596	\$5,050,415
2. Receivables		
a. Insurance premium tax	\$950,000	\$719,099
b. Employee contributions	27,510	42,995
c. Securities sold	394,610	-
d. Accrued interest and dividends	130,628	137,988
e. Currency contract receivable	26,496,957	31,815,043
f. Other	-	334,914
g. Rebate and fee income receivable	-	-
h. Total receivables	\$27,999,705	\$33,050,039
3. Investments, at fair value	\$68,954,536	\$69,100,364
4. Liabilities		
a. Benefits and refunds payable	(\$1,064)	(\$14,016)
b. Securities purchased	(258,273)	(581,371)
c. Administrative and consulting fees payable	(110,608)	(157,260)
d. Currency contract payable	(26,242,343)	(31,753,090)
e. Securities lending collateral	(4,065,563)	(3,629,095)
f. Total liabilities	(\$30,677,851)	(\$36,134,832)
5. Total market value of assets available for benefits	\$74,037,986	\$71,065,986

**Reconciliation of Plan Net Assets**

Assets at Market Value		
Item	FYE 2016	FYE 2015
A. Market value of assets at beginning of year	\$71,065,986	\$74,029,777
B. Contribution income:		
1. Contributions		
a. Employee	\$420,922	\$398,050
b. Employer	-	-
c. Other	3,237,371	2,257,968
d. Total	<u>\$3,658,293</u>	<u>\$2,656,018</u>
2. Investment income		
a. Interest, dividends, and other income	\$1,449,217	\$1,673,588
b. Net appreciation	3,808,995	(1,945,520)
c. Investment expenses	(340,556)	(425,080)
d. Net investment income	<u>\$4,917,656</u>	<u>(\$697,012)</u>
3. Securities lending		
a. Gross income	\$31,929	\$25,352
b. Deductions	(9,660)	(3,637)
c. Net investment income	<u>\$22,269</u>	<u>\$21,715</u>
4. Benefits and refunds		
a. Refunds	(\$35,162)	(\$34,719)
b. Regular monthly benefits	(5,506,699)	(4,832,911)
c. Total	<u>(\$5,541,861)</u>	<u>(\$4,867,630)</u>
5. Administrative and miscellaneous expenses	(\$84,357)	(\$76,882)
C. Market value of assets at end of year	\$74,037,986	\$71,065,986

**Progress of Fund Through December 31, 2016**

<b>Plan Year Ending December 31</b>	<b>Employer Contributions*</b>	<b>Employee Contributions**</b>	<b>Administrative Expenses</b>	<b>Net Investment Income***</b>	<b>Benefit Payments</b>	<b>Transfers</b>	<b>Actuarial Value of Assets</b>
Total	\$5,437,542	\$876,769	(\$161,239)	\$8,403,438	(\$10,409,491)	-	
2015	\$2,238,612	\$417,406	(\$76,882)	\$4,356,336	(\$4,867,630)	-	\$76,097,619
2016	3,198,930	459,363	(84,357)	4,047,102	(5,541,861)	-	78,176,796

\* Employer contributions equal to 50% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming prior to July 1, 2015 and 70% of the gross premium taxes on or after July 1, 2015

\*\* Employee contributions may include member redeposits and member service purchase contributions

\*\*\* Net of investment expenses

**Development of Actuarial Value of Assets**

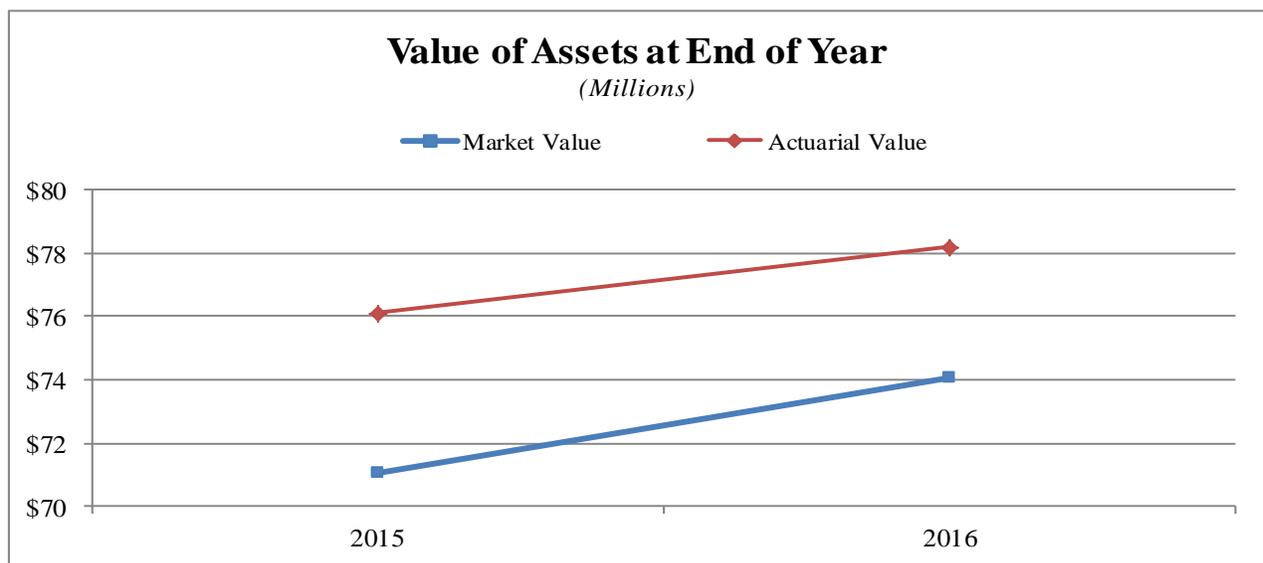
Item	FYE 2016	FYE 2015
1. Actuarial value of assets, beginning of year (before corridor)	\$76,097,619	\$74,029,777
2. Market value, end of year	\$74,037,986	\$71,065,986
3. Market value, beginning of year	\$71,065,986	\$74,029,777
4. Non-investment/administrative net cash flow:		
a. Employee contributions	\$420,922	\$398,050
b. Employer contributions	-	-
c. Other contributions	3,237,371	2,257,968
d. Refund of employee accounts	(35,162)	(34,719)
e. Retirement benefits	(5,541,861)	(4,867,630)
f. Administrative expenses	(84,357)	(76,882)
g. Total net cash flow: [sum of (4a) through (4f)]	(\$2,003,087)	(\$2,323,213)
5. Investments and securities lending:		
a. Interest and dividends on investments	\$1,449,217	\$1,673,588
b. Gross income from securities lending	31,929	25,352
c. Fees and expenses	(350,216)	(428,717)
d. Total net income: [sum of (5a) through (5c)]	\$1,130,930	\$1,270,223
6. Investment income:		
a. Actual market return: (2) - (3) - (4g) - (5d)	\$3,844,157	(\$1,910,801)
b. Assumed rate of return	7.75%	7.75%
c. Assumed amount of return	4,300,513	4,378,740
d. Amount subject to phase-in: (6a) - (6c)	(\$456,356)	(\$6,289,541)
7. Phase-in recognition of investment income:		
a. Current year: 0.20 * (6d)	(\$91,271)	(\$1,257,908)
b. First prior year	(1,257,908)	-
c. Second prior year	-	-
d. Third prior year	-	-
e. Fourth prior year	-	-
f. Total recognition	(\$1,349,179)	(\$1,257,908)
<b>8. Actuarial value of assets, end of year</b>		
a. Preliminary actuarial value of assets, end of year: (1) + (4g) + (5d) + (6c) + (7f)	\$78,176,796	\$76,097,619
b. Upper corridor limit: 120% * (2)	\$88,845,583	\$85,279,183
c. Lower corridor limit: 80% * (2)	\$59,230,389	\$56,852,789
d. Actuarial value of assets, end of year	\$78,176,796	\$76,097,619
9. Difference between market and actuarial value of assets	(\$4,138,810)	(\$5,031,633)
<b>10. Actuarial rate of return</b>	5.44%	6.03%
<b>11. Market rate of return*</b>	7.60%	-0.26%
<b>12. Ratio of actuarial value to market value of assets</b>	105.59%	107.08%

\* Current year market rate of return is based on unaudited data and is supplied by the plan's investment consultant.

### History of Investment Returns

Plan Year (1)	Market Value (2)	Actuarial Value (3)
2015	-0.26%	6.03%
2016	7.60%	5.44%
<b>Average returns:</b>		
Last two years:	3.60%	5.73%

The market returns above are gross of investment expenses and were provided by the plan's investment consultant. The actuarial returns above are based on the financial information provided by the plan's auditors.



**Solvency Test**

Valuation Date January 1	Total Active Member Contributions (1)	Inactive and Pensioner Liability (2)	Employer Financed Active Accrued Liability (3)	Actuarial Value of Assets	Percentage of Liabilities Covered by Assets		
					(1)	(2)	(3)
2016	\$5,369,518	\$60,709,865	\$36,199,040	\$76,097,619	100%	100%	27.7%
2017	5,467,501	61,194,577	35,582,775	78,176,796	100%	100%	32.4%

**Schedule of Funding Progress**

(1)	(2)	(3)	(4)	(5)	(6)
<b>Valuation Date</b>	<b>Actuarial Value of Assets</b>	<b>Actuarial Accrued Liability (AAL)</b>	<b>Unfunded AAL (UAAL) [(3) - (2)]</b>	<b>Funded Ratio [(2)/(3)]</b>	<b>UAAL per Active Member</b>
January 1					
2016	\$76,097,619	\$102,278,423	\$26,180,804	74.40%	\$11,005
2017	78,176,796	102,244,853	24,068,057	76.46%	10,374

*Liabilities are calculated assuming no future cost-of-living increases.*

**Schedule of Contributions from the Employer(s) and Other Contributing Entities**

(1)	(2)	(3)	(4)
Fiscal Year Ending December 31	Actuarially Determined Contribution	Employer Contributions*	Percentage of Actuarially Determined Contribution Contributed [(3)/(2)]
2016	\$3,128,272	\$3,198,930	102.26%
2017	2,923,585	-	-

\* 70% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming.

**Reconciliation of Participant Data**

	<b>Active Participants</b>	<b>Vested Former Participants</b>	<b>Retired Participants</b>	<b>Beneficiaries</b>	<b>Participants Due Refunds</b>	<b>Total</b>
<b>Number as of January 1, 2016*</b>	<b>2,379</b>	<b>283</b>	<b>1,090</b>	<b>217</b>	<b>1,107</b>	<b>5,076</b>
New participants	174	-	-	-	210	384
Vested terminations	(58)	58	-	-	-	-
Retirements	(69)	(14)	83	-	-	-
Disability	-	-	-	-	-	-
Deceased with beneficiary	(1)	-	(24)	25	-	-
Deceased without beneficiary	(1)	-	(9)	(7)	(1)	(18)
Due refunds	(113)	-	-	-	113	-
Lump sum payoffs	(7)	(12)	-	-	(19)	(38)
Rehires/return to active	17	(7)	-	-	(10)	-
Certain period expired	-	-	-	-	-	-
Reclassifications	-	-	-	-	-	-
Data corrections	(1)	-	-	-	-	(1)
<b>Number as of January 1, 2017</b>	<b>2,320</b>	<b>308</b>	<b>1,140</b>	<b>235</b>	<b>1,400</b>	<b>5,403</b>

**Demographic Statistics**

	<b>As of 1/1/2017</b>	<b>As of 1/1/2016</b>	<b>Delta</b>
<u>Active Participants</u>			
Number	2,320	2,379	-2.5%
<i>Vested</i>	1,489	1,513	
<i>Not vested</i>	831	866	
Average age (years)	44.50	44.49	0.0%
Average service (years)	11.18	11.01	1.5%
Average entry age (years)	33.32	33.48	-0.5%
Total employee contributions with interest	\$5,467,501	\$5,369,518	1.8%
Average employee contributions with interest	\$2,357	\$2,257	4.4%
<u>Vested Former Participants</u>			
Number	308	283	8.8%
Average age (years)	49.04	48.50	1.1%
Total employee contributions with interest	\$599,438	\$551,072	8.8%
Average employee contributions with interest	\$1,946	\$1,947	-0.1%
<u>Retirees</u>			
Number	1,140	1,090	4.6%
Average age (years)	69.92	69.82	0.1%
Total annual benefits	\$5,027,891	\$4,743,628	6.0%
Average annual benefit	\$4,410	\$4,352	1.3%
<u>Beneficiaries</u>			
Number	235	217	8.3%
Average age (years)	72.16	71.26	1.3%
Total annual benefits	\$591,978	\$545,372	8.5%
Average annual benefit	\$2,519	\$2,513	0.2%
<u>Participants Due Refunds</u>			
Number	1,400	1,107	26.5%
Total Refunds Due	\$505,738	\$410,499	23.2%

**Distribution of Male Active Members by Age and by Years of Service**

Average Age = 44.3      Average Service = 11.8

Age Last Birthday		Whole Years of Service at Valuation Date							Totals
		0-4	9-May	14-Oct	15-19	20-24	25-29	30 Plus	
<b>Less than 20</b>	Count	26	-	-	-	-	-	-	26
	Total Contributions	\$4,677	-	-	-	-	-	-	\$4,677
	Avg. Contributions	\$180	-	-	-	-	-	-	\$180
<b>20-24</b>	Count	79	3	-	-	-	-	-	82
	Total Contributions	25,320	\$3,184	-	-	-	-	-	28,505
	Avg. Contributions	321	\$1,061	-	-	-	-	-	348
<b>25-29</b>	Count	118	31	2	-	-	-	-	151
	Total Contributions	49,092	37,627	\$4,112	-	-	-	-	90,830
	Avg. Contributions	416	1,214	\$2,056	-	-	-	-	602
<b>30-34</b>	Count	137	79	27	3	-	-	-	246
	Total Contributions	60,261	102,032	60,223	\$9,429	-	-	-	231,944
	Avg. Contributions	440	1,292	2,230	\$3,143	-	-	-	943
<b>35-39</b>	Count	96	84	57	34	3	-	-	274
	Total Contributions	41,887	109,265	131,168	116,594	\$13,736	-	-	412,649
	Avg. Contributions	436	1,301	2,301	3,429	\$4,579	-	-	1,506
<b>40-44</b>	Count	76	60	47	28	16	2	-	229
	Total Contributions	35,018	76,746	109,222	99,931	80,175	\$11,272	-	412,364
	Avg. Contributions	461	1,279	2,324	3,569	5,011	\$5,636	-	1,801
<b>45-49</b>	Count	51	43	44	39	36	19	3	235
	Total Contributions	22,468	58,216	110,987	135,953	178,160	113,744	\$26,171	645,699
	Avg. Contributions	441	1,354	2,522	3,486	4,949	5,987	\$8,724	2,748
<b>50-54</b>	Count	28	37	53	38	45	64	24	289
	Total Contributions	9,710	51,479	130,291	146,326	225,496	410,114	210,507	1,183,924
	Avg. Contributions	347	1,391	2,458	3,851	5,011	6,408	8,771	4,097
<b>55-59</b>	Count	30	29	31	49	58	84	72	353
	Total Contributions	14,281	39,379	82,181	178,671	296,377	519,942	577,593	1,708,424
	Avg. Contributions	476	1,358	2,651	3,646	5,110	6,190	8,022	4,840
<b>60-64</b>	Count	16	22	17	7	9	8	8	87
	Total Contributions	6,555	31,687	49,401	23,417	47,067	49,198	64,731	272,055
	Avg. Contributions	410	1,440	2,906	3,345	5,230	6,150	8,091	3,127
<b>65-69</b>	Count	10	9	7	-	-	-	-	26
	Total Contributions	4,016	17,452	15,436	-	-	-	-	36,904
	Avg. Contributions	402	1,939	2,205	-	-	-	-	1,419
<b>70 &amp; Over</b>	Count	4	1	-	-	-	-	-	5
	Total Contributions	1,721	1,466	-	-	-	-	-	3,187
	Avg. Contributions	430	1,466	-	-	-	-	-	637
<b>Totals</b>	Count	<b>671</b>	<b>398</b>	<b>285</b>	<b>198</b>	<b>167</b>	<b>177</b>	<b>107</b>	<b>2,003</b>
	Total Contributions	<b>\$275,007</b>	<b>\$528,533</b>	<b>\$693,021</b>	<b>\$710,321</b>	<b>\$841,010</b>	<b>\$1,104,270</b>	<b>\$879,001</b>	<b>\$5,031,162</b>
	Avg. Contributions	<b>\$410</b>	<b>\$1,328</b>	<b>\$2,432</b>	<b>\$3,587</b>	<b>\$5,036</b>	<b>\$6,239</b>	<b>\$8,215</b>	<b>\$2,512</b>

**Distribution of Female Active Members by Age and by Years of Service**

Average Age = 45.6    Average Service = 7.1

Age Last Birthday		Whole Years of Service at Valuation Date						Totals	
		0-4	5-9	10-14	15-19	20-24	25-29		30 Plus
<b>Less than 20</b>	Count	2	-	-	-	-	-	-	2
	Total Contributions	\$534	-	-	-	-	-	-	\$534
	Avg. Contributions	\$267	-	-	-	-	-	-	\$267
<b>20-24</b>	Count	14	-	-	-	-	-	-	14
	Total Contributions	4,756	-	-	-	-	-	-	4,756
	Avg. Contributions	340	-	-	-	-	-	-	340
<b>25-29</b>	Count	19	3	-	-	-	-	-	22
	Total Contributions	8,804	\$3,689	-	-	-	-	-	12,493
	Avg. Contributions	463	\$1,230	-	-	-	-	-	568
<b>30-34</b>	Count	25	11	1	-	-	-	-	37
	Total Contributions	8,498	13,721	\$2,048	-	-	-	-	24,267
	Avg. Contributions	340	1,247	\$2,048	-	-	-	-	656
<b>35-39</b>	Count	29	12	1	1	-	-	-	43
	Total Contributions	12,702	14,832	2,589	\$3,471	-	-	-	33,594
	Avg. Contributions	438	1,236	2,589	\$3,471	-	-	-	781
<b>40-44</b>	Count	18	7	5	2	-	-	-	32
	Total Contributions	8,478	8,750	14,468	7,381	-	-	-	39,077
	Avg. Contributions	471	1,250	2,894	3,691	-	-	-	1,221
<b>45-49</b>	Count	17	10	3	5	-	1	-	36
	Total Contributions	5,639	12,729	6,422	16,694	-	\$5,512	-	46,996
	Avg. Contributions	332	1,273	2,141	3,339	-	\$5,512	-	1,305
<b>50-54</b>	Count	12	18	5	2	1	4	1	43
	Total Contributions	5,290	24,500	10,787	8,516	\$5,306	25,314	\$8,307	88,020
	Avg. Contributions	441	1,361	2,157	4,258	\$5,306	6,329	\$8,307	2,047
<b>55-59</b>	Count	12	19	3	6	4	1	3	48
	Total Contributions	5,753	26,091	6,610	20,854	19,542	6,373	21,362	106,584
	Avg. Contributions	479	1,373	2,203	3,476	4,885	6,373	7,121	2,221
<b>60-64</b>	Count	4	12	4	2	3	3	-	28
	Total Contributions	2,519	17,606	8,920	7,170	15,653	18,486	-	70,353
	Avg. Contributions	630	1,467	2,230	3,585	5,218	6,162	-	2,513
<b>65-69</b>	Count	7	3	-	-	-	-	-	10
	Total Contributions	3,830	4,428	-	-	-	-	-	8,258
	Avg. Contributions	547	1,476	-	-	-	-	-	826
<b>70 &amp; Over</b>	Count	1	1	-	-	-	-	-	2
	Total Contributions	433	975	-	-	-	-	-	1,408
	Avg. Contributions	433	975	-	-	-	-	-	704
<b>Totals</b>	Count	<b>160</b>	<b>96</b>	<b>22</b>	<b>18</b>	<b>8</b>	<b>9</b>	<b>4</b>	<b>317</b>
	Total Contributions	<b>\$67,234</b>	<b>\$127,321</b>	<b>\$51,844</b>	<b>\$64,086</b>	<b>\$40,500</b>	<b>\$55,685</b>	<b>\$29,669</b>	<b>\$436,339</b>
	Avg. Contributions	<b>\$420</b>	<b>\$1,326</b>	<b>\$2,357</b>	<b>\$3,560</b>	<b>\$5,063</b>	<b>\$6,187</b>	<b>\$7,417</b>	<b>\$1,376</b>

**Distribution of Total Active Members by Age and by Years of Service**

Average Age = 44.5      Average Service = 11.2

Age Last Birthday	Whole Years of Service at Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		
<b>Less than 20</b>	Count	28	-	-	-	-	-	28	
	Total Contributions	\$5,211	-	-	-	-	-	\$5,211	
	Avg. Contributions	\$186	-	-	-	-	-	\$186	
<b>20-24</b>	Count	93	3	-	-	-	-	96	
	Total Contributions	30,076	\$3,184	-	-	-	-	33,260	
	Avg. Contributions	323	\$1,061	-	-	-	-	346	
<b>25-29</b>	Count	137	34	2	-	-	-	173	
	Total Contributions	57,895	41,316	\$4,112	-	-	-	103,323	
	Avg. Contributions	423	1,215	\$2,056	-	-	-	597	
<b>30-34</b>	Count	162	90	28	3	-	-	283	
	Total Contributions	68,758	115,753	62,271	\$9,429	-	-	256,211	
	Avg. Contributions	424	1,286	2,224	\$3,143	-	-	905	
<b>35-39</b>	Count	125	96	58	35	3	-	317	
	Total Contributions	54,589	124,097	133,757	120,064	\$13,736	-	446,243	
	Avg. Contributions	437	1,293	2,306	3,430	\$4,579	-	1,408	
<b>40-44</b>	Count	94	67	52	30	16	2	261	
	Total Contributions	43,496	85,496	123,690	107,312	80,175	\$11,272	451,441	
	Avg. Contributions	463	1,276	2,379	3,577	5,011	\$5,636	1,730	
<b>45-49</b>	Count	68	53	47	44	36	20	3	271
	Total Contributions	28,107	70,946	117,408	152,647	178,160	119,255	\$26,171	692,694
	Avg. Contributions	413	1,339	2,498	3,469	4,949	5,963	\$8,724	2,556
<b>50-54</b>	Count	40	55	58	40	46	68	25	332
	Total Contributions	15,000	75,979	141,078	154,842	230,802	435,428	218,815	1,271,944
	Avg. Contributions	375	1,381	2,432	3,871	5,017	6,403	8,753	3,831
<b>55-59</b>	Count	42	48	34	55	62	85	75	401
	Total Contributions	20,033	65,470	88,792	199,525	315,918	526,315	598,955	1,815,008
	Avg. Contributions	477	1,364	2,612	3,628	5,095	6,192	7,986	4,526
<b>60-64</b>	Count	20	34	21	9	12	11	8	115
	Total Contributions	9,074	49,292	58,321	30,587	62,719	67,684	64,731	342,408
	Avg. Contributions	454	1,450	2,777	3,399	5,227	6,153	8,091	2,977
<b>65-69</b>	Count	17	12	7	-	-	-	-	36
	Total Contributions	7,846	21,880	15,436	-	-	-	-	45,162
	Avg. Contributions	462	1,823	2,205	-	-	-	-	1,255
<b>70 &amp; Over</b>	Count	5	2	-	-	-	-	-	7
	Total Contributions	2,155	2,441	-	-	-	-	-	4,595
	Avg. Contributions	431	1,220	-	-	-	-	-	656
<b>Totals</b>	Count	<b>831</b>	<b>494</b>	<b>307</b>	<b>216</b>	<b>175</b>	<b>186</b>	<b>111</b>	<b>2,320</b>
	Total Contributions	<b>\$342,241</b>	<b>\$655,854</b>	<b>\$744,865</b>	<b>\$774,406</b>	<b>\$881,510</b>	<b>\$1,159,954</b>	<b>\$908,671</b>	<b>\$5,467,501</b>
	Avg. Contributions	<b>\$412</b>	<b>\$1,328</b>	<b>\$2,426</b>	<b>\$3,585</b>	<b>\$5,037</b>	<b>\$6,236</b>	<b>\$8,186</b>	<b>\$2,357</b>

**Schedule of Pensions Recipients Added to and Removed from Rolls**

Fiscal Year Ending December 31	Added to Rolls*		Removed from Rolls		Total		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	Count	Annual Pension Benefits	Count	Annual Pension Benefits	Count	Annual Pension Benefits		
	2014	106	\$368,168	35	\$114,448	1,251		
2015	81	1,113,515	25	74,858	1,307	5,289,000	24.44%	4,047
2016	108	461,121	40	130,252	1,375	5,619,869	6.26%	4,087

\* Added to amounts in 2015 include increased benefit amounts under the provisions of the new plan.

**Retirees by Monthly Benefit and Age**

<b>Males</b>	<b>Age Last Birthday</b>						
<b>Benefit Amount</b>	<b>Under 60</b>	<b>60-64</b>	<b>65-69</b>	<b>70-74</b>	<b>75-79</b>	<b>80 &amp; over</b>	<b>Total</b>
<b>Under \$50</b>	-	-	-	-	-	-	-
<b>\$50 - 99</b>	-	-	1	3	1	1	6
<b>\$100 - 149</b>	-	1	6	10	8	1	26
<b>\$150 - 199</b>	-	3	25	18	10	29	85
<b>\$200 - 249</b>	-	12	26	19	29	40	126
<b>\$250 - 299</b>	-	15	22	31	18	13	99
<b>\$300 - 349</b>	-	19	32	31	9	10	101
<b>\$350 - 399</b>	-	29	48	26	6	9	118
<b>\$400 &amp; Over</b>	-	226	139	67	31	14	477
<b>Total</b>	-	<b>305</b>	<b>299</b>	<b>205</b>	<b>112</b>	<b>117</b>	<b>1,038</b>
<b>Females</b>							
<b>Benefit Amount</b>	<b>Under 60</b>	<b>60-64</b>	<b>65-69</b>	<b>70-74</b>	<b>75-79</b>	<b>80 &amp; over</b>	<b>Total</b>
<b>Under \$50</b>	-	-	-	-	-	-	-
<b>\$50 - 99</b>	-	1	-	5	1	-	7
<b>\$100 - 149</b>	-	3	3	3	4	-	13
<b>\$150 - 199</b>	-	3	3	-	1	3	10
<b>\$200 - 249</b>	-	4	4	6	5	3	22
<b>\$250 - 299</b>	-	2	1	1	-	-	4
<b>\$300 - 349</b>	-	5	3	5	-	1	14
<b>\$350 - 399</b>	-	2	6	4	-	-	12
<b>\$400 &amp; Over</b>	-	12	7	1	-	-	20
<b>Total</b>	-	<b>32</b>	<b>27</b>	<b>25</b>	<b>11</b>	<b>7</b>	<b>102</b>
<b>Males &amp; Females</b>							
<b>Benefit Amount</b>	<b>Under 60</b>	<b>60-64</b>	<b>65-69</b>	<b>70-74</b>	<b>75-79</b>	<b>80 &amp; over</b>	<b>Total</b>
<b>Under \$50</b>	-	-	-	-	-	-	-
<b>\$50 - 99</b>	-	1	1	8	2	1	13
<b>\$100 - 149</b>	-	4	9	13	12	1	39
<b>\$150 - 199</b>	-	6	28	18	11	32	95
<b>\$200 - 249</b>	-	16	30	25	34	43	148
<b>\$250 - 299</b>	-	17	23	32	18	13	103
<b>\$300 - 349</b>	-	24	35	36	9	11	115
<b>\$350 - 399</b>	-	31	54	30	6	9	130
<b>\$400 &amp; Over</b>	-	238	146	68	31	14	497
<b>Total</b>	-	<b>337</b>	<b>326</b>	<b>230</b>	<b>123</b>	<b>124</b>	<b>1,140</b>

**Beneficiaries by Monthly Benefit and Age**

Males	Age Last Birthday								Total	
	Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79		80 & over
Under \$50	-	-	-	-	-	-	-	-	-	-
\$50 - 99	-	-	-	1	-	-	-	-	-	1
\$100 - 149	-	-	-	1	-	1	1	1	1	4
\$150 - 199	-	-	1	-	1	-	-	-	1	3
\$200 - 249	-	-	-	1	-	-	1	-	-	2
\$250 - 299	-	-	-	-	1	-	-	-	-	1
\$300 - 349	-	-	-	-	-	-	-	-	1	1
\$350 - 399	-	-	-	-	-	-	-	-	-	-
\$400 & Over	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	-	-	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>		<b>12</b>
Females										
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total	
Under \$50	-	-	-	-	-	-	-	1	1	
\$50 - 99	-	-	-	-	-	-	-	2	2	
\$100 - 149	-	-	2	2	3	2	6	38	53	
\$150 - 199	-	-	5	3	4	12	13	18	55	
\$200 - 249	-	-	7	7	6	10	10	9	49	
\$250 - 299	-	-	4	6	5	8	3	3	29	
\$300 - 349	-	-	4	5	4	2	1	1	17	
\$350 - 399	-	-	2	4	2	2	-	-	10	
\$400 & Over	-	-	2	1	1	3	-	-	7	
<b>Total</b>	-	-	<b>26</b>	<b>28</b>	<b>25</b>	<b>39</b>	<b>33</b>	<b>72</b>	<b>223</b>	
Males & Females										
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total	
Under \$50	-	-	-	-	-	-	-	1	1	
\$50 - 99	-	-	-	1	-	-	-	2	3	
\$100 - 149	-	-	2	3	3	3	7	39	57	
\$150 - 199	-	-	6	3	5	12	13	19	58	
\$200 - 249	-	-	7	8	6	10	11	9	51	
\$250 - 299	-	-	4	6	6	8	3	3	30	
\$300 - 349	-	-	4	5	4	2	1	2	18	
\$350 - 399	-	-	2	4	2	2	-	-	10	
\$400 & Over	-	-	2	1	1	3	-	-	7	
<b>Total</b>	-	-	<b>27</b>	<b>31</b>	<b>27</b>	<b>40</b>	<b>35</b>	<b>75</b>	<b>235</b>	

**Pensions Awarded in 2016 by Status**

Average Age = 60.7

<b>Males &amp; Females</b>	<b>Status</b>		
<b>Benefit Amount</b>	<b>Retirees</b>	<b>Beneficiaries</b>	<b>Total</b>
<b>Under \$50</b>	0	0	0
<b>\$50-\$99</b>	2	0	2
<b>\$100-\$149</b>	9	7	16
<b>\$150-\$199</b>	4	6	10
<b>\$200-\$249</b>	6	8	14
<b>\$250-\$299</b>	5	1	6
<b>\$300-\$349</b>	5	2	7
<b>\$350-\$399</b>	3	0	3
<b>\$400 &amp; over</b>	49	1	50
<b>Total</b>	<b>83</b>	<b>25</b>	<b>108</b>
<b>Males &amp; Females</b>			
<b>Age Last Birthday</b>	<b>Retirees</b>	<b>Beneficiaries</b>	<b>Total</b>
<b>Under 50</b>	0	1	1
<b>50-54</b>	0	0	0
<b>55-59</b>	0	1	1
<b>60-64</b>	76	1	77
<b>65-69</b>	6	3	9
<b>70-74</b>	1	9	10
<b>75-79</b>	0	3	3
<b>80-84</b>	0	2	2
<b>85 &amp; over</b>	0	5	5
<b>Total</b>	<b>83</b>	<b>25</b>	<b>108</b>

**Retirees by Service at Retirement and Years Since Retirement**

Average Service at Retirement = 18.2      Average Years Since Retirement = 9.2

Service at Retirement		Years Elapsed Since Retirement							Totals
		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
<b>Less than 5</b>	Count	1	-	4	1	-	-	-	6
	Avg. Benefit	\$119	-	\$234	\$257	-	-	-	\$219
<b>5-9</b>	Count	42	15	5	16	10	3	-	91
	Avg. Benefit	\$124	\$143	\$145	\$169	\$184	\$149	-	\$144
<b>10-14</b>	Count	54	39	45	41	24	6	2	211
	Avg. Benefit	\$207	\$218	\$223	\$220	\$224	\$228	\$249	\$218
<b>15-19</b>	Count	35	56	64	22	7	7	4	195
	Avg. Benefit	\$305	\$311	\$302	\$298	\$306	\$305	\$276	\$305
<b>20-24</b>	Count	82	97	49	13	12	5	-	258
	Avg. Benefit	\$401	\$397	\$395	\$380	\$373	\$359	-	\$395
<b>25-29</b>	Count	104	59	27	15	11	-	-	216
	Avg. Benefit	\$494	\$476	\$482	\$460	\$428	-	-	\$482
<b>30-34</b>	Count	62	37	20	10	-	-	-	129
	Avg. Benefit	\$569	\$571	\$550	\$518	-	-	-	\$562
<b>35 &amp; Over</b>	Count	24	7	2	1	-	-	-	34
	Avg. Benefit	\$614	\$556	\$653	\$720	-	-	-	\$608
<b>Totals</b>	Count	<b>404</b>	<b>310</b>	<b>216</b>	<b>119</b>	<b>64</b>	<b>21</b>	<b>6</b>	<b>1,140</b>
	Avg. Benefit	<b>\$400</b>	<b>\$386</b>	<b>\$351</b>	<b>\$305</b>	<b>\$290</b>	<b>\$274</b>	<b>\$267</b>	<b>\$368</b>

**Retirees by Year of Retirement**

January 1, 2017 Total = 1,140

<b>Year of Retirement</b>	<b>Count</b>	<b>Year of Retirement</b>	<b>Count</b>
<b>Under 1980</b>	-	<b>1998</b>	28
<b>1980</b>	-	<b>1999</b>	15
<b>1981</b>	-	<b>2000</b>	28
<b>1982</b>	-	<b>2001</b>	25
<b>1983</b>	2	<b>2002</b>	46
<b>1984</b>	-	<b>2003</b>	40
<b>1985</b>	1	<b>2004</b>	39
<b>1986</b>	3	<b>2005</b>	39
<b>1987</b>	1	<b>2006</b>	51
<b>1988</b>	2	<b>2007</b>	66
<b>1989</b>	3	<b>2008</b>	52
<b>1990</b>	4	<b>2009</b>	56
<b>1991</b>	9	<b>2010</b>	65
<b>1992</b>	8	<b>2011</b>	72
<b>1993</b>	8	<b>2012</b>	102
<b>1994</b>	12	<b>2013</b>	87
<b>1995</b>	17	<b>2014</b>	87
<b>1996</b>	19	<b>2015</b>	58
<b>1997</b>	20	<b>2016*</b>	75

*\*May include retirements as of January 1, 2017*

**Thirty Year Projected Benefit Payments**

<b>Year Ending December 31</b>	<b>Actives</b>	<b>Retirees*</b>	<b>Total</b>
<b>2017</b>	\$ 542,084	\$ 5,730,891	\$ 6,272,975
<b>2018</b>	1,122,777	5,691,336	6,814,113
<b>2019</b>	1,489,539	5,648,441	7,137,979
<b>2020</b>	1,897,347	5,601,309	7,498,656
<b>2021</b>	2,274,514	5,556,944	7,831,457
<b>2022</b>	2,600,738	5,493,020	8,093,758
<b>2023</b>	2,938,974	5,432,557	8,371,532
<b>2024</b>	3,254,831	5,362,419	8,617,250
<b>2025</b>	3,576,264	5,285,127	8,861,390
<b>2026</b>	3,835,157	5,200,904	9,036,061
<b>2027</b>	4,018,652	5,111,325	9,129,977
<b>2028</b>	4,203,593	5,011,789	9,215,382
<b>2029</b>	4,416,692	4,905,650	9,322,343
<b>2030</b>	4,612,515	4,793,275	9,405,790
<b>2031</b>	4,813,308	4,672,394	9,485,702
<b>2032</b>	5,018,713	4,541,851	9,560,563
<b>2033</b>	5,196,897	4,410,360	9,607,257
<b>2034</b>	5,364,692	4,269,488	9,634,180
<b>2035</b>	5,499,551	4,117,884	9,617,436
<b>2036</b>	5,618,956	3,961,529	9,580,484
<b>2037</b>	5,784,277	3,797,780	9,582,057
<b>2038</b>	5,939,479	3,623,984	9,563,463
<b>2039</b>	6,046,458	3,455,430	9,501,888
<b>2040</b>	6,140,114	3,275,291	9,415,405
<b>2041</b>	6,210,674	3,098,719	9,309,393
<b>2042</b>	6,286,686	2,916,800	9,203,486
<b>2043</b>	6,349,536	2,728,366	9,077,902
<b>2044</b>	6,366,492	2,537,214	8,903,706
<b>2045</b>	6,347,179	2,343,316	8,690,495
<b>2046</b>	6,317,237	2,150,487	8,467,724

\* Includes Disabled Members, Beneficiaries, and Deferred Vested Members.

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## **APPENDIX A**

### **SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

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## Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the January 1, 2017 actuarial valuation report.

### 1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

### 2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level dollar amount. Under this method, the employer contribution amount is the sum of (i) the employer normal cost amount, and (ii) the amount that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 7.75%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, and sex. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and a unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant employer contribution amount which, if applied to each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.

- d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 years from the valuation date.

3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

The actuarial value of assets has been reinitialized to the market value of assets as of January 1, 2015. This was a result of the establishment of the new fund as of July 1, 2015, created under House Bill 72 of the 2015 General Session, which replaces the Volunteer Firemen's Pension Fund and the Volunteer Firefighter Emergency Medical Technician Pension Fund.

4. Economic Assumptions

Investment return: 7.75% per year, compounded annually, composed of an assumed 3.25% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of investment expenses.

5. Demographic Assumptions

a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 5 years with a multiplier of 104%

Females: Set back 4 years with a multiplier of 90%

Healthy Post-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 1 year with a multiplier of 104%

Females: Set back 0 years with a multiplier of 90%

Age	Pre-Retirement		Post-Retirement		Withdrawal	
	Sample Rates Shown Below Projected to 2017 using Scale BB				Entry Age	
	Male	Female	Male	Female	<46	>45
20	0.03%	0.02%	0.03%	0.02%	20.00%	N/A
25	0.03%	0.02%	0.04%	0.02%	15.00%	N/A
30	0.04%	0.02%	0.04%	0.02%	11.00%	N/A
35	0.04%	0.03%	0.07%	0.04%	11.00%	N/A
40	0.08%	0.04%	0.10%	0.06%	9.00%	N/A
45	0.11%	0.07%	0.14%	0.10%	4.00%	15.00%
50	0.15%	0.10%	0.20%	0.14%	3.00%	15.00%
55	0.21%	0.16%	0.32%	0.22%	1.00%	8.00%
60	0.36%	0.25%	0.56%	0.38%	0.00%	5.00%
65	0.62%	0.43%	0.97%	0.71%	0.00%	5.00%
70	1.08%	0.80%	1.59%	1.23%	0.00%	5.00%
75			2.73%	2.06%	0.00%	5.00%
80			4.66%	3.36%	0.00%	5.00%
85			8.03%	5.68%	0.00%	5.00%
90			14.10%	9.82%	0.00%	5.00%
95			23.14%	15.80%	0.00%	5.00%
100			32.63%	20.31%	0.00%	5.00%

Retirement Rates: Members are assumed to retire at first eligibility.

6. Other Assumptions

- a. Percent married: 85% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.
- e. Decrement timing: Decrements of all types are assumed to occur mid-year.
- f. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

- g. Incidence of contributions: Contributions are assumed to be received continuously throughout the year.
- h. Benefit service: All members are assumed to accrue one year of service each year.
- i. Premium tax allocation: Provided by staff and based on booked total premium taxes.
- j. Percent of eligible deferred vested members electing a refund: 75% of all future deferred vested members are assumed to leave their contributions in the fund and elect a deferred vested annuity payable commencing at age 60.
- k. No benefit data is available for members entitled to deferred benefits. The benefit is estimated using the final average compensation and service provided by WRS.

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## **APPENDIX B**

### SUMMARY OF PLAN PROVISIONS

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## Summary of Plan Provisions

<b>Covered Members</b>	Any volunteer firefighter or volunteer EMT for whom payments are received by the Volunteer Firefighter and EMT pension account as prescribed in W.S. 35-9-621(e).
<b>Service Retirement</b>	
Eligibility	Age 60 with 5 years of service.
Monthly Benefit	\$16 per month for each of the first 10 years of service and \$19 per month for each year of service over 10.  Normal Form of Payment is a 66% Joint & Survivor Annuity for married retirees and life annuity for unmarried retirees.  Any contributing member of the discontinued Volunteer Firefighter Pension Plan and the Volunteer Emergency Medical Technician Pension Plan on June 30, 2015 is grandfathered in certain provisions of the discontinued plans, including receiving the greater of the benefit under the previous plan and the service retirement benefit under this plan.
<b>Vesting</b>	Any member with five or more years of service who has left employment, and who has not withdrawn accumulated contributions, is eligible to receive the above benefit or can elect to receive a lump-sum refund of contributions with interest. In addition, a member with at least ten years of service may gain extra years of service by continuing to contribute, up to a maximum number of months served as an active member. A member who terminates with less than five years of service is only eligible for the lump-sum benefit.
<b>Pre-retirement Death Benefit</b>	
Eligibility	No age or service requirements.
Monthly Benefit	Upon the death of any participating member, the board shall authorize a monthly payment to the surviving spouse of the member during the spouse's remaining lifetime of an amount equal to 66% of the amount calculated above based on actual years of service, or five years of service if greater. Benefits are also payable to children under age 21, equal to 33% of the amount calculated above, upon death of the member and spouse.

### Post-retirement Death Benefit

Monthly Benefit                      66% of the member's benefit payable prior to the member's death. Benefits are also payable to children under age 21, equal to 33% of the amount calculated above, upon death of the member and spouse.

### Lump Sum Death Benefit

Benefit                                      A lump sum payment of \$5,000, or \$2,500 for members who contributed \$5.00 per month before July 1, 1989, less the amount of the monthly benefits paid to the estate upon the spouse's death. For a deceased member without an eligible survivor, the greater of the deceased member's account or \$5,000 (\$2,500 for certain members) is payable to the estate of the deceased member.

### Contributions

Employee                                      \$15.00 per month.

State    Up to 70% of gross fire insurance premium taxes paid on fire insurance policies in Wyoming. Once the funded ratio rises to 107%, contributions may drop to a level no less than 60% of the gross fire insurance premium taxes paid on fire insurance policies in Wyoming.

Interest                                         3.0% annually.

**Cost-of-Living Improvements**        W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.